

APPENDIX

157. A method of using a fire extinguishing agent, comprising the steps of:

- (a) providing a fire-extinguishing agent consisting essentially of an azeotropic or near azeotropic blend of fluoroiodocarbon and at least one additive selected from the group consisting of hydrofluorocarbons, perfluorocarbons and fluoroethers, in a discharge apparatus; and
- (b) discharging a fire-extinguishing amount of the fire-extinguishing agent from the discharge apparatus into contact with a combustible or flammable material.

158. The method of claim 157, wherein the fluoroiodocarbon is selected from the group consisting of bromodifluoroiodomethane, chlorodifluoroiodomethane, 1,1,2,2,3,3,4,4,5,5-decafluoro-1,5-diiodopentane, difluorodiiodomethane, difluoroiodomethane, 1,2,2,3,3,4,4,5,5,6,6,-dodecafluoro-1,6-diiodohexane, fluoroiodomethane, 1,1,1,2,3,3,3-heptafluoro-2-iodopropane, 1,1,2,2,3,3,3-heptafluoro-1-iodopropane, 1,1,2,2,3,3-hexafluoro-1,3-diiodopropane, 1-idoheptadecafluorooctane, iodoheptafluorocyclobutane, 1-iodopentadecafluoroheptane, iodopentafluoro-cyclopropane, 1-iodotridecafluorohexane, 1-ido-undecafluoropentane, N-iodobis-(trifluoromethyl)amine, 1,1,2,2,3,3,4,4,4-nonafluoro-1-iodobutane, 1,1,2,2,3,3,4,4-octafluoro-1,4-diiodobutane, pentafluoroiodoethane, 1,1,2,2-tetrafluoro-1,2-diiodoethane, 1,1,2,2-tetrafluoro-1-idoethane, 1,1,2-trifluoro-1-idoethane, trifluoroiodomethane, and trifluoromethyl-1,1,2,,2-tetrafluoro-2-idoethyl ether.

160. The method of claim 157, wherein the fluoroiodocarbon comprises CF_3I and the additive comprises trifluoromethane.

161. The method of claim 157, wherein the fluoroiodocarbon comprises CF_3I and the additive comprises pentafluoroethane.

162. The method of claim 157, wherein fluoroiodocarbon comprises CF_3I and the additive comprises 1,1,1,2-tetrafluoroethane.

163. The method of claim 157, wherein fluoroiodocarbon comprises CF_3I and the additive comprises 1,1,1-trifluoroethane.

164. The method of claim 157, wherein the fluoroiodocarbon comprises CF_3I and the additive comprises perfluorobutane.

165. The method of claim 157, wherein the fluoroiodocarbon comprises $\text{CF}_3\text{CF}_2\text{CF}_2\text{I}$ and the additive comprises perfluorohexane.

166. The method of claim 157, wherein the additive comprises a hydrofluorocarbon selected from the group of consisting of 1,1,1,2,3,3,3-heptafluoropropane, pentafluoroethane, 1,1,2,2,3-pentafluoropropane, 1,1,1,2-tetrafluoroethane, 1,1,2,2-tetrafluoroethane, 1,1,1-trifluoroethane, 1,1,2-trifluoroethane and trifluoromethane.

167. The method of claim 157, wherein the additive comprises a perfluorocarbon selected from the group of consisting of decafluorobutane, dodecafluoropentane, hexafluorocyclopropane, hexafluoroethane, octafluorocyclobutane, octafluoropropane, tetradecafluorohexane and tetrafluoromethane.

169. A method of using a fire extinguishing agent, comprising the steps of:

(a) placing the agent in a discharge apparatus; and

(b) discharging a fire-extinguishing amount of the agent from the discharge apparatus into contact with a combustible or flammable material, wherein the agent consists essentially of an azeotropic or near azeotropic blend of at least one additive selected from the group consisting of hydrofluorocarbons, perfluorocarbons and fluoroethers, and a fluoroiodocarbon selected from the group consisting of bromodifluoroiodomethane, chlorodifluoroiodomethane, 1,1,2,2,3,3,4,4,5,5-decafluoro-1,5-diiodopentane, 1,2,2,3,3,4,4,5,5,6,6-dodecafluoro-1,6-diiodohexane, 1,1,2,2,3,3-hexafluoro-1,3-diiodopropane, 1-idoheptadecafluorooctane, iodoheptafluorocyclobutane, 1-iodopentadecafluoroheptane, iodopentafluorocyclopropane, 1-iodoundecafluoropentane, N-iodobis(trifluoromethyl)amine, 1,1,2,2,3,3,4,4,4-nonafluoro-1-iodobutane, 1,1,2,2,3,3,4,4-octafluoro-1,4-diiodobutane, 1,1,2,2-tetrafluoro-1,2-diiodoethane, and trifluoromethyl-1,1,2,2-tetrafluoro-2-iodoethyl ether.

170. A method of using a fire extinguishing agent, comprising the steps of:

(a) providing a fire-extinguishing agent comprising a blend of a fluoroiodocarbon and at least one additive selected from the group consisting of hydrofluorocarbons, perfluorocarbons and fluoroethers in a discharge apparatus; and

(b) discharging a fire-extinguishing amount of the fire-extinguishing agent from the discharge apparatus into contact with a combustible or flammable material.

171. The method of claim 170, wherein the fluoroiodocarbon is selected from the group consisting of bromodifluoroiodomethane, chlorodifluoroiodomethane, 1,1,2,2,3,3,4,4,5,5-decafluoro-1,5-diiodopentane, difluorodiiodomethane, difluoroiodomethane, 1,2,2,3,3,4,4,5,5,6,6-dodecafluoro-1,6-diiodohexane, fluoroiodomethane, 1,1,1,2,3,3,3-heptafluoro-2-iodopropane, 1,1,2,2,3,3,3-heptafluoro-1-iodopropane, 1,1,2,2,3,3-hexafluoro-1,3-diiodopropane, 1-iodoheptadecafluoroctane, iodoheptafluorocyclobutane, 1-iodopentadecafluoroheptane, iodopentafluoro-cyclopropane, 1-iodotridecafluorohexane, 1-iodoundecafluoropentane, N-iodobis-(trifluoromethyl)amine, 1,1,2,2,3,3,4,4,4-nonafluoro-1-iodobutane, 1,1,2,2,3,3,4,4-octafluoro-1,4-diiodobutane, pentafluoroiodoethane, 1,1,2,2-tetrafluoro-1,2-diidoethane, 1,1,2,2-tetrafluoro-1-idoethane, 1,1,2-trifluoro-1-idoethane, trifluoroiodomethane, and trifluoromethyl-1,1,2,2-tetrafluoro-2-idoethyl ether.

172. The method of claim 170, wherein the fluoroiodocarbon comprises CF_3I and the additive is selected from the group consisting of trifluoromethane, pentafluoroethane, 1,1,1,2-tetrafluoroethane and 1,1,1-trifluoroethane.

173. The method of claim 170, wherein the fluoroiodocarbon comprises CF_3I and the additive comprises perfluorobutane or perfluorohexane.

174. The method of claim 170, wherein the additive comprises a hydrofluorocarbon selected from the group of consisting of 1,1,1,2,3,3,3-heptafluoropropane, pentafluoroethane, 1,1,2,2,3-pentafluoropropane, 1,1,1,2-tetrafluoroethane, 1,1,2,2-tetrafluoroethane, 1,1,1-trifluoroethane, 1,1,2-trifluoroethane and trifluoromethane.

175. The method of claim 170 wherein the additive comprises a perfluorocarbon selected from the group consisting of decafluorobutane, dodecafluoropentane, hexafluorocyclopropane, hexafluoroethane, octafluorocyclobutane, octafluoropropane, tetradecafluorohexane and tetrafluoromethane.

177. A method of using a fire extinguishing agent, comprising the steps of:

- (a) placing the agent in a discharge apparatus; and
- (b) discharging a fire-extinguishing amount of the agent from the discharge apparatus into contact with a combustible or flammable material, wherein the agent comprises a blend of a fluoroiodocarbon and at least one additive, the fluoroiodocarbon being selected from the group consisting of bromodifluoroiodomethane, chlorodifluoroiodomethane, 1,1,2,2,3,3,4,4,5,5-decafluoro-1,5-diiodopentane, 1,2,2,3,3,4,4,5,5,6,6-dodecafluoro-1,6-diiodohexane, 1,1,2,2,3,3-hexafluoro-1,3-diiodopropane, 1-idoheptadecafluoroctane, iodoheptafluorocyclobutane, 1-iodopentadecafluoroheptane, iodopentafluorocyclopropane, 1-iodoundecafluoropentane, n-iodobis-(trifluoromethyl)amine, 1,1,2,2,3,3,4,4,4-nonafluoro-1-iodobutane, 1,1,2,2,3,3,4,4-octafluoro-1,4-diiodobutane, 1,1,2,2-tetrafluoro-1,2-diidoethane and trifluoromethyl-1,1,2,2-tetrafluoro-2-iodoethyl ether, and the additive being selected from the group consisting of hydrofluorocarbons, perfluorocarbons and fluoroethers.

178. The method of claim 157, wherein the fluoroiodocarbon is of the formula $C_aH_bBr_cCl_dF_eI_fN_gO_h$, wherein a is between and including 1 and 8, b is between and including 0 and 2, c, d, g, and h are each between and including 0 and 1, e is between and including 1 and 17, and f is between and including 1 and 2.

179. The method of claim 157, wherein the fluoroiodocarbon is selected from the group consisting of CF_3I , $CF_3CF_2CF_2I$ and $CF_3CF_2CF_2CF_2I$.